

(a) providing a microfluidic device comprising a main flow path comprising a detection zone, and an outlet and at least two inlet flow paths intersecting and merging with the main flow path at or upstream of the detection zone;

(b) applying at least one cell which is capable of flowing in the microfluidic device to a first inlet flow path and [the] a candidate compound to a second inlet flow path;

(c) inducing flow of the cells and the candidate compound toward the outlet;

(d) allowing the cells to mix with the candidate compound [at the intersection of the second inlet flow path and the main flow path]; and

(f) observing the effect of the candidate compound on the cells in the detection zone.

Please add the following new claims:

--35. The method of Claim 17 wherein the microfluidic device has four inlet flow paths and a third candidate compound is added to the fourth inlet flow path.--

--36. The method of Claim 21, wherein the cells are mammalian cells.--

--37. The method of Claim 36, wherein the mammalian cells are blood cells.--

--38. A method of observing the effect of one or more candidate compounds on cells in an observation device comprising:

(a) providing an observation device comprising a plurality of microfluidic devices sharing a common detection zone, said microfluidic devices comprising a main flow path comprising a detection zone, and an outlet and at least two inlet flow paths intersecting and merging with the main flow path at or upstream of the detection zone;

(b) applying at least one cell which is capable of flowing in the microfluidic device to a first inlet flow path of a first microfluidic device and a first candidate compound to a second inlet flow path of the first microfluidic device;

(c) applying at least one cell which is capable of flowing in the microfluidic device to a first inlet flow path of a second microfluidic device and a second candidate compound

to a second inlet flow path of a second microfluidic device;

(c) inducing flow of the cells and the candidate compounds toward the outlet;

(d) allowing the cells to mix with the candidate compounds; and

(f) observing the effect of the candidate compound on the cells in the common detection zone.--

--39. The method of Claim 38, wherein the main flow paths of the microfluidic devices are substantially parallel at the common detection zone.--

### REMARKS

It is respectfully requested that this application be considered in view of the above amendments and the following remarks and that all of the claims remaining in this application be allowed.

Claims 16 - 31 and 35 - 39 are currently pending in the application.

1. Amendments

Applicants have amended the specification to correct the authorship of a reference.

Applicants cancel Claims 1 - 15 and 32 - 34 without prejudice to filing a divisional application directed to the canceled subject matter.

Applicants have amended Claim 16 to clarify that it is a method of observing the effect of one or more candidate compounds on cells. Support for this amendment can be found in dependent Claim 17 which depends from Claim 16 and recites a second candidate compound. Applicants have also amended Claim 16 to clarify that the cell is capable of flowing in the microfluidic device. Step (c) of Claim 16 recites that the flow of the cells in the microfluidic device is induced.